CLAIMS

What is claimed is:

1. A method for matching and consolidating addresses in a name and address database, the method comprising:

(a) sorting records from the name and address database and records from a standardized name and address file by a first e-mail address field to create a sorted name and address file;

(b) sorting records from a prior e-mail database and records from a converted e-mail file by a second e-mail address field to create a sorted e-mail file;

(c) matching said records from said sorted e-mail file against said records from said sorted name and address file, wherein each of said records of said sorted e-mail file that match a one of said records from said sorted name and address file has a name and address from each said matched sorted name and address record added to each of said matched record of said sorted e-mail file to create a matched name and address e-mail file;

(d) sorting records from said matched name and address e-mail file and records from said standardized name and address file by a first ZIP Code field and a first last name field to create a first sorted name and address transactions file;

(e) updating the name and address database by matching records from said first sorted name and address transactions file

against records from a prior consolidated name and address database to create a new name and address database; and

(f) consolidating said new name and address database by eliminating records from said new name and address database such that only one record per an e-mail address per an individual in a household remains to create a new consolidated name and address database.

2. A method for matching and consolidating addresses in a name and address database according to claim 1 further comprising:

preprocessing at least one outside data file by appending at least one new field to each record in said at least one outside data file to create at least one preprocessed data file;

converting said at least one preprocessed data file into database records by applying a list conversion program to said at least one preprocessed data file to create a converted name and address file containing each of said database records that meet a predetermined criteria, and to create said converted e-mail file containing each of said database records that do not meet said predetermined criteria; and

processing each of said converted database records contained in said converted name and address file to standardize an address data for each of said converted database records to create said standardized name and address file.

3. A method for matching and consolidating addresses in a name and address database according to claim 2 wherein said at least one new field comprises at least one of a file code field, a sequence number field, a transaction date field, and a value field.

4. A method for matching and consolidating addresses in a name and address database according to claim 1 wherein said sorting step (a) comprises excluding from said sorted name and address file each record from the name and address database and each record from said standardized name and address file that does not contain an e-mail address in said e-mail address field.

5. A method for matching and consolidating addresses in a name and address database according to claim 1 wherein said matching step (c) comprises creating a new e-mail database containing records from said sorted e-mail file that do not match said records from said sorted name and address file, wherein said new e-mail database becomes said prior e-mail database in a subsequent run of the method for matching and consolidating addresses in a name and address database.

6. A method for matching and consolidating addresses in a name and address database according to claim 1 further comprising:

sending said first sorted name and address transactions file out for change of address processing to create a change of address processed transactions file.

7. A method for matching and consolidating addresses in a name and address database according to claim 6 wherein said change of address processing is performed by a Unites States Postal Service licensed National Change Of Address vendor.

8. A method for matching and consolidating addresses in a name and address database according to claim 6 further comprising:

applying said change of address processed transactions file to said first sorted name and address transactions file; and

altering each record in said first sorted name and address transactions file that has had an address change to create a name and address applied transactions file containing each of said altered records and containing each unaltered record.

9. A method for matching and consolidating addresses in a name and address database according to claim 8 further comprising:

sorting records from said name and address applied transactions file together with records from a change of address applied database by a second ZIP Code field and a second last name field to create a second sorted name and address transactions file.

10. A method for matching and consolidating addresses in a name and address database according to claim 1 wherein said updating step (e) further comprises:

when a first record with an incomplete address matches a second record with a complete address, replacing said incomplete address of said first record with said complete address from said second record.

11. A method for matching and consolidating addresses in a name and address database according to claim 1 wherein said updating step (e) comprises:

utilizing a match code technique for matching said records from said first sorted name and address transactions file against said records from said prior consolidated name and address database.

12. A method for matching and consolidating addresses in a name and address database according to claim 11 wherein said match code technique comprises:

converting a name and address from each record of said first sorted name and address transactions file into a match code;

converting a name and address from each record of said prior consolidated name and address database into said match code; and

matching by said match code of said each record of said first sorted name and address transactions file against said match code

of said each record of said prior consolidated name and address database.

13. A method for matching and consolidating addresses in a name and address database according to claim 12 wherein said match code for said each record of said first sorted name and address transactions file is comprised of a portion of characters of said name and address of each said record of said first sorted name and address transactions file, and said match code for said each record of said prior consolidated name and address database is comprised of said portion of characters of said name and address of each said record of said prior consolidated name and address database.

14. A method for matching and consolidating addresses in a name and address database according to claim 13 wherein said portion of characters are drawn from a ZIP Code, a surname, and a street address.

15. A method for matching and consolidating addresses in a name and address database according to claim 13 wherein said portion of characters are drawn from a first name, a last name, and a street address.

16. A method for matching and consolidating addresses in a name and address database according to claim 1 wherein said updating step (e) comprises:

utilizing a match algorithm technique for matching said records from said first sorted name and address transactions file against said records from said prior consolidated name and address database.

17. A method for matching and consolidating addresses in a name and address database according to claim 16 wherein said match algorithm technique comprises:

sorting said records from said first sorted name and address transactions file and said records from said prior consolidated name and address database by a partial match code, wherein said partial match code comprises a portion of characters of a name and address of each said record;

grouping said sorted records by names having a same partial match code; and

comparing each said grouped sorted record against every other said grouped sorted record.

18. A method for matching and consolidating addresses in a name and address database according to claim 16 wherein said match algorithm matches a percentage of at least one critical field,

wherein each said at least one critical field is matched character by character, and a match percent is calculated as

match percent =

$$\frac{\text{Number of Matches}}{(\#\text{ of characters in both at least one critical fields})/2.}$$

19. A method for matching and consolidating addresses in a name and address database according to claim 1 wherein said consolidating step (f) comprises:

writing a transaction level data link record for each record in said new consolidated name and address database to create a transaction level data link file.

20. A method for matching and consolidating addresses in a name and address database according to claim 1 wherein said consolidating step (f) comprises:

assigning a two-digit code to each record within a household in said new consolidated name and address database;

determining which of said each record within a household has a lowest code value; and

placing the street address from said record within a household having the lowest code in all records within said household.

21. A method for matching and consolidating addresses in a name and address database according to claim 19 wherein a first position of said two-digit code is based on the presence of a ZIP+4

Code in each of said records within said household in said new consolidated name and address database, and a second position of said two-digit code is based on a type of address found in each of said records within said household in said new consolidated name and address database.

22. A computer system for consolidating addresses in a name and address database, said computer system comprising:

dynamic data link software;

a storage device for storing said dynamic data link software and the name and address database;

a memory for loading said dynamic data link software from said storage device; and

a processing element, wherein said dynamic data link software loaded into said memory is executable by said processing element, wherein upon execution by said processing element, said dynamic data link software accesses and sorts records from the name and address database and records from a standardized name and address file by a first e-mail address field to create a sorted name and address file, and

said dynamic data link software sorts records from a prior e-mail database and records from a converted e-mail file by a second e-mail address field to create a sorted e-mail file, and

said dynamic data link software matches said records from said sorted e-mail file against said records from said sorted name and address file, wherein each of said records of said sorted e-mail file that match a one of said records from said sorted name and address file has a name and address from each said matched sorted name and address record added to each of said matched record of said sorted e-mail file to create a matched name and address e-mail file, and

said dynamic data link software sorts records from said matched name and address e-mail file and records from said standardized name and address file by a first ZIP Code field and a first last name field to create a first sorted name and address transactions file, and

said dynamic data link software updates the name and address database by matching records from said first sorted name and address transactions file against records from a prior consolidated name and address database to create a new name and address database, and

said dynamic data link software consolidates said new name and address database by eliminating records from said new name and address database such that only one record per an e-mail address per an individual in a household remains to create a new consolidated name and address database.

23. A computer system for consolidating addresses in a name and address database according to claim 22 wherein said dynamic data link software preprocesses at least one outside data file by appending at least one new field to each record in said at least one outside data file to create at least one preprocessed data file, and

said dynamic data link software converts said at least one preprocessed data file into database records by applying a list conversion program to said at least one preprocessed data file to

create a converted name and address file containing each of said database records that meet a predetermined criteria, and

said dynamic data link software creates said converted e-mail file containing each of said database records that do not meet said predetermined criteria, and

said dynamic data link software processes each of said converted database records contained in said converted name and address file to standardize an address data for each of said converted database records to create said standardized name and address file.

24. A computer system for consolidating addresses in a name and address database according to claim 22 wherein said dynamic data link software utilizes a match code technique for matching said records from said first sorted name and address transactions file against said records from said prior consolidated name and address database.

25. A computer system for consolidating addresses in a name and address database according to claim 22 wherein said dynamic data link software utilizes a match algorithm technique for matching said records from said first sorted name and address transactions file against said records from said prior consolidated name and address database.

26. An apparatus for consolidating addresses in a name and address database, said apparatus comprising:

storage means for storing a dynamic data link software and the name and address database;

memory means for loading said dynamic data link software from said storage means; and

processing means, wherein said dynamic data link software loaded into said memory is executable by said processing means, wherein upon execution by said processing means, said dynamic data link software accesses and sorts records from the name and address database and records from a standardized name and address file by a first e-mail address field to create a sorted name and address file, and

said dynamic data link software sorts records from a prior e-mail database and records from a converted e-mail file by a second e-mail address field to create a sorted e-mail file, and

said dynamic data link software matches said records from said sorted e-mail file against said records from said sorted name and address file, wherein each of said records of said sorted e-mail file that match a one of said records from said sorted name and address file has a name and address from each said matched sorted name and address record added to each of said matched record of said sorted e-mail file to create a matched name and address e-mail file, and

said dynamic data link software sorts records from said matched name and address e-mail file and records from said standardized name and address file by a first ZIP Code field and a first last name field to create a first sorted name and address transactions file, and

said dynamic data link software updates the name and address database by matching records from said first sorted name and address transactions file against records from a prior consolidated name and address database to create a new name and address database, and

said dynamic data link software consolidates said new name and address database by eliminating records from said new name and address database such that only one record per an e-mail address per an individual in a household remains to create a new consolidated name and address database.

27. An apparatus for consolidating addresses in a name and address database according to claim 26 wherein said dynamic data link software preprocesses at least one outside data file by appending at least one new field to each record in said at least one outside data file to create at least one preprocessed data file, and

said dynamic data link software converts said at least one preprocessed data file into database records by applying a list conversion program to said at least one preprocessed data file to

create a converted name and address file containing each of said database records that meet a predetermined criteria, and

said dynamic data link software creates said converted e-mail file containing each of said database records that do not meet said predetermined criteria, and

said dynamic data link software processes each of said converted database records contained in said converted name and address file to standardize an address data for each of said converted database records to create said standardized name and address file.

28. An apparatus for consolidating addresses in a name and address database according to claim 26 wherein said dynamic data link software utilizes a match code technique for matching said records from said first sorted name and address transactions file against said records from said prior consolidated name and address database.

29. An apparatus for consolidating addresses in a name and address database according to claim 26 wherein said dynamic data link software utilizes a match algorithm technique for matching said records from said first sorted name and address transactions file against said records from said prior consolidated name and address database.

30. A method for updating a name and address database, the method comprising:

(a) utilizing an e-mail address for at least one key match element in matching a plurality of records in the name and address database with a plurality of records from at least one new input data stream;

(b) grouping a plurality of e-mail addresses for a same individual matched from said plurality of records in the name and address database and said plurality of records from at least one new input data stream forming a plurality of subgroup of records;

(c) comparing dynamically a plurality of common elements from a first subgroup of said plurality of subgroup of records;

(d) applying a predetermined criteria to said plurality of common elements to select a best e-mail address; and

(e) saving said selected best e-mail address with a record for said same individual in the name and address database.

31. A method for updating a name and address database according to claim 30 wherein said predetermined criteria to select a best e-mail address comprises at least one of a last used date, a frequency of usage, and a monetary value associated with the e-mail address.

32. A method for updating a name and address database according to claim 30 further comprising:

repeating steps (c), (d), and (e) for a next subgroup of records from said plurality of subgroup of records until all of said plurality of subgroup of records are processed.

33. A method for updating a name and address database according to claim 30 further comprising:

saving each of said plurality of records from the name and address database with a blank street address that have an e-mail address, a name, and a ZIP Code in the name and address database; and

saving each of said plurality of records from said at least one new input data stream with a blank street address that have an e-mail address, a name, and a ZIP Code in the name and address database.

34. A method for updating a name and address database, the method comprising:

(a) applying a predetermined match algorithm to a plurality of records from at least one new input data stream and to a plurality of records from the name and address database;

(b) grouping said plurality of records from said at least one new input data stream and said plurality of records from the name and address database based on the results of said predetermined match algorithm forming a plurality of subgroup of records;

(c) from a first subgroup of records from said plurality of subgroup of records, selecting a plurality of best elements; and

(d) when said first subgroup of records contains at least one record from the name and address database, updating said at least one record from the name and address database with said plurality of best elements; and

(e) when said first subgroup of records does not contain said at least one record from the name and address database, creating a new record having said plurality of best elements.

35. A method for updating a name and address database according to claim 34 further comprising:

setting a percent match on at least one field from said plurality of records from the name and address database and from said plurality of records from said new input data stream prior to said applying step (a).

36. A method for updating a name and address database according to claim 34 wherein said creating step (e) further comprises:

creating a new household ID and a new Individual ID for said new record having said plurality of best elements.

37. A method for updating a name and address database according to claim 34 further comprising:

repeating steps (c), (d), and (e) for a next subgroup of records from said plurality of subgroup of records until all of said plurality of subgroup of records are processed.

38. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method for matching and consolidating addresses in a name and address database in a computer system, said method comprising:

(a) preprocessing at least one outside name and address file to append at least one new field to each record in said at least one outside name and address file;

(b) preprocessing at least one outside e-mail file to append at least one new field to each record in said at least one outside e-mail file;

(c) converting said preprocessed at least one outside name and address file into a plurality of database records through a list conversion program;

(d) converting said preprocessed at least one outside e-mail file into a plurality of database records through said list conversion program;

(e) standardizing address data for each of said plurality of database records from said at least one outside name and address file;

(f) sorting said plurality of database records each having said standardized address data from said at least one outside name and address file with a plurality of records from a prior consolidated name and address database by a first e-mail address field yielding a sorted name and address file;

(g) sorting said converted plurality of database records from said at least one outside e-mail file with a plurality of records from a prior e-mail address database by a second e-mail address field yielding a sorted e-mail file;

(h) matching said sorted name and address file with said sorted e-mail file yielding a matched name and address e-mail file;

(i) sorting said plurality of database records each having said standardized address data from said at least one outside name and address file with said matched name and address e-mail file yielding a first sorted name and address transactions file;

(j) matching said prior consolidated name and address database with said first sorted name and address transactions file using a merge/purge algorithm yielding a new name and address database; and

(k) eliminating a plurality of records from said new name and address database such that only one record per e-mail address per individual in a household remains yielding a new consolidated name and address database.

39. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 38 wherein said at least one new field comprises at least one of a file code field, a sequence number field, a transaction date field, and a value field.

40. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 38 wherein said sorting step (f) comprises excluding from said sorted name and address file each record from the name and address database and each record having said standardized address data from said at least one outside name and address file that does not contain an e-mail address in said first e-mail address field.

41. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 38 wherein said matching step (h) comprises creating a new e-mail database containing a plurality of records from said sorted e-mail file that do not match any records from said sorted name and address file, wherein said new e-mail database becomes said prior e-mail database in a subsequent run of the method for matching and consolidating addresses in the name and address database.

42. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 38 further comprising:

sending said first sorted name and address transactions file out for change of address processing to create a change of address processed transactions file.

43. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 42 wherein said change of address processing is performed by a Unites States Postal Service licensed National Change Of Address vendor.

44. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 42 further comprising:

applying said change of address processed transactions file to said first sorted name and address transactions file; and

altering each record in said first sorted name and address transactions file that has had an address change to create a name and address applied transactions file containing each of said altered records and containing each unaltered record.

45. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 44 further comprising:

sorting records from said name and address applied transactions file together with records from a change of address applied database by a second ZIP Code field and a second last name field to create a second sorted name and address transactions file.

46. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 38 wherein said matching step (j) further comprises:

when a first record with an incomplete address matches a second record with a complete address, replacing said incomplete address of said first record with said complete address from said second record.

47. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 38 wherein said matching step (j) comprises:

utilizing a match code technique for matching said records from said first sorted name and address transactions file against said records from said prior consolidated name and address database.

48. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 47 wherein said match code technique comprises:

converting a name and address from each record of said first sorted name and address transactions file into a match code;

converting a name and address from each record of said prior consolidated name and address database into said match code; and

matching by said match code of said each record of said first sorted name and address transactions file against said match code

of said each record of said prior consolidated name and address database.

49. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 48 wherein said match code for each said record of said first sorted name and address transactions file is comprised of a portion of characters of said name and address of each said record of said first sorted name and address transactions file, and said match code for each said record of said prior consolidated name and address database is comprised of said portion of characters of said name and address of each said record of said prior consolidated name and address database.

50. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 49 wherein said portion of characters are drawn from a ZIP Code, a surname, and a street address.

51. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 49 wherein said portion of characters are drawn from a first name, a last name, and a street address.

52. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 38 wherein said matching step (j) comprises:

utilizing a match algorithm technique for matching said records from said first sorted name and address transactions file against said records from said prior consolidated name and address database.

53. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 52 wherein said match algorithm technique comprises:

sorting said records from said first sorted name and address transactions file and said records from said prior consolidated name and address database by a partial match code, wherein said partial match code comprises a portion of characters of a name and address of each said record;

grouping said sorted records by names having a same partial match code; and

comparing each said grouped sorted record against every other said grouped sorted record.

54. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 52 wherein said match algorithm matches a percentage of at least one critical field, wherein each said at least one critical

field is matched character by character, and a match percent is calculated as

match percent =

$$\frac{\text{Number of Matches}}{(\#\text{ of characters in both at least one critical fields})/2.}$$

55. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 38 wherein said eliminating step (k) comprises:

writing a transaction level data link record for each record in said new consolidated name and address database to create a transaction level data link file.

56. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 38 wherein said eliminating step (k) comprises:

assigning a two-digit code to each record within a household in said new consolidated name and address database;

determining which of said each record within a household has a lowest code value; and

placing the street address from said record within a household having the lowest code in all records within said household.

57. Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method according to claim 56 wherein a first position of said two-digit code is

based on the presence of a ZIP+4 Code in each of said records within said household in said new consolidated name and address database, and a second position of said two-digit code is based on a type of address found in each of said records within said household in said new consolidated name and address database.